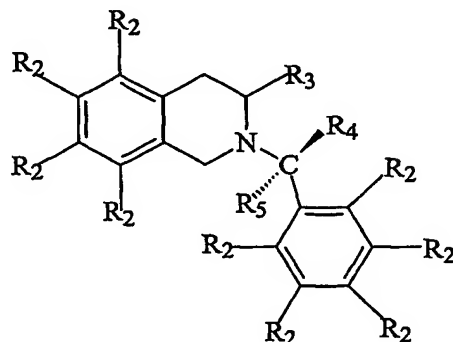


CLAIMS

Having thus described our invention, what we claim as new and desire to secure by Letters Patent is as follows:

1. A sulfated compound having the chemical structure:



wherein

R₂ is selected from the group consisting of hydrogen and sulfate moieties, and may be the same or different at each location, provided that at least one location is a sulfate moiety, and

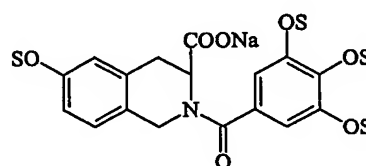
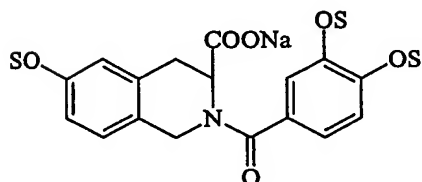
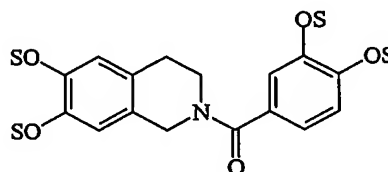
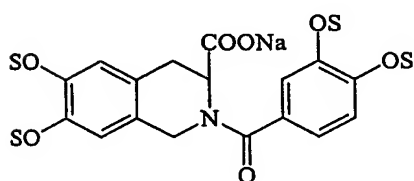
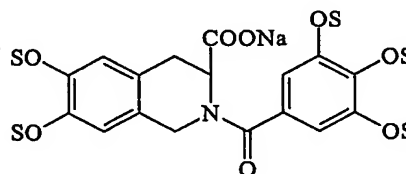
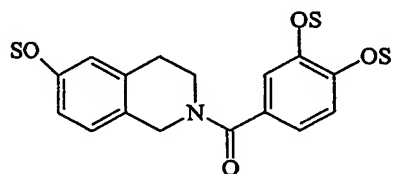
R₃ is selected from the group consisting of hydrogen and a carboxylate moiety,

R₄ is a hydrogen or oxygen, and

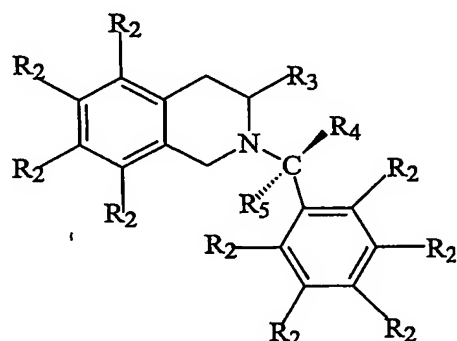
R₅ is a hydrogen if R₄ is a hydrogen, and is absent if R₄ is oxygen.

2. The sulfated compound of claim 1 further comprising at least one cation or cationic group selected from the group consisting of sodium, potassium, ammonium, and tetraalkylammonium.
3. The sulfated compound of claim 1 wherein R₃ is hydrogen.
4. The sulfated compound of claim 1 wherein R₃ is a carboxylate moiety.
5. The sulfated compound of claim 1 wherein at least two of R₂ are sulfate moieties.

6. The sulfated compound of claim 1 wherein at least three of R_2 are sulfate moieties.
7. The sulfated compound of claim 1 wherein at least four of R_2 are sulfate moieties.
8. The sulfated compound of claim 1 wherein at least five of R_2 are sulfate moieties.
9. The sulfated compound of claim 1 wherein at least one of R_2 on a phenyl ring and at least one of R_2 on an isoquinoline ring is a sulfate moiety.
10. The sulfated compound of claim 1 wherein R_4 is oxygen of a carbonyl and R_5 is absent.
11. The sulfated compound of claim 1 wherein R_4 and R_5 are hydrogen.
12. The sulfated compound of claim 1 having a chemical structure selected from the group consisting of:



13. An anticoagulation method comprising the step of exposing blood or a component thereof to a compound having the chemical structure:



wherein

R_2 is selected from the group consisting of hydrogen and sulfate moieties, and may be the same or different at each location, provided that at least one location is a sulfate moiety, and

R_3 is selected from the group consisting of hydrogen and a carboxylate moiety,

R_4 is a hydrogen or oxygen, and

R_5 is a hydrogen if R_4 is a hydrogen, and is absent if R_4 is oxygen.

14. The method of claim 13 wherein the exposing step is performed extracorporeal.

15. The method of claim 13 wherein R_4 is an oxygen.